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Amendments to the Abstract

Catalyst compositions and methods, useful in polymerization processes, utilizing at least two metal compounds are disclosed. At least one of the metal compounds is a Group 15 containing metal compound and the other metal compound is preferably a bulky ligand metallocene-type catalyst. The invention also discloses a new polyolefin, generally polyethylene, particularly a multimodal polymer and more specifically, a bimodal polymer, and its use in various end-use applications such as film, molding and pipe. The Group 15 containing metal compound is represented in one embodiment by the formulae:

$$R^{3} - L \xrightarrow{R^{1} - Y} R^{6}$$

$$R^{2} - Z \xrightarrow{R^{7}} R^{7}$$

<u>or</u>

wherein M is a Group 4, 5 or 6 metal;

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each X is independently a leaving group;

y is 0 or 1;

n is the oxidation state of M;

m is the formal charge of the ligand comprising the YZL or YZL' groups;

L is a Group 15 or 16 element;

L' is a Group 15 or 16 element or Group 14 containing group;

Y is a Group 15 element:

Z is a Group 15 element:

and the other groups are as defined herein.